

WHAT IS CLAIMED IS:

1. A method of recognizing offices of a ring network having first and second network connecting offices for connecting ring networks together and for dropping a  
5 signal from a terminal office, comprising the steps of:  
recognizing at each node of the ring network, based upon channel setting information, which office the node is;  
executing a procedure, which is for creating  
10 squelch tables of working and protection channels based upon the channel setting information, between a first node, which has been recognized as being the first network connecting office or the terminal office, and other nodes;  
15 identifying a second node, which is the second network connecting office, at the first node by the procedure for creating a squelch table of the protection channel;  
sending office identification information, upon  
20 embedding this information in the squelch table of the protection channel, from the first node to the second node; and  
recognizing, at the second node, that this node is the second network connecting office based upon the  
25 office identification information.
2. The method according to claim 1, further comprising a step of constructing a ring topology;

wherein said second node determines whether it is a

second network connecting office of an arrangement in which the terminal office exists outside first and second network connecting offices, or a second network connecting office of an arrangement in which a terminal

5 office exists intermediate first and second network connecting offices, this determination depending upon whether two offices consisting of a source office and a destination office that have been entered in a source-office name field and a destination-office name field,  
10 respectively, of the squelch table are arrayed in a sequence that agrees with an array sequence of the offices in the ring topology.

3. The method according to claim 1, wherein in an arrangement in which the terminal office exists outside  
15 the first and second network connecting offices, a node recognized as being the first network connecting office is said first node.

4. The method according to claim 1, wherein in an arrangement in which the terminal office exists  
20 intermediate the first and second network connecting offices, a node recognized as being the terminal office is said first node.

5. The method according to claim 1, wherein in a network arrangement in which first and second ring  
25 networks are connected via an intermediate ring network in which a channel is unterminated, said method of recognizing offices is applied to office recognition of first and second network connecting offices of the

intermediate ring network for connection to the first ring network and to office recognition of third and fourth network connecting offices of the intermediate ring network for connection to the second ring network;

5 and

office recognition of the entire intermediate ring network is performed by sending and receiving squelch tables, in which office identification information has been embedded, between a network connecting office on

10 the side of the first ring network and a network connecting office on the side of the second ring network.

6. A method of recognizing offices of a ring network having first and second network connecting offices for connecting ring networks together and for dropping a

15 signals from a terminal office, comprising the steps of:

recognizing at each node of the ring network, based upon channel setting information, whether the node is the first network connecting office of an arrangement in which the terminal office exists outside the first and

20 second network connecting offices;

executing a procedure, which is for creating squelch tables of working and protection channels based upon the channel setting information, between a first node, which has been recognized as being the first

25 network connecting office, and other nodes;

identifying a second node, which is the second network connecting office, at the first node by the procedure for creating a squelch table of the protection

channel;

sending office identification information, upon embedding this information in the squelch table of the protection channel, from the first node to the second

5 node; and

recognizing, at the second node, that this node is the second network connecting office based upon the office identification information.

7. The method according to claim 6, wherein the office  
10 identification information is information specifying a range of the working channel obtained when a squelch table of the working channel is created; and

on the basis of this information, said second node recognizes that it is the second network connecting  
15 office and recognizes which node is the first network connecting office and which node is the terminal office.

8. The method according to claim 7, wherein the information specifying the range of the working channel is office identification information of the first  
20 network connecting office and of the terminal office;

the first node enters this information in a source-office name field and a destination-office name field of the squelch table of the protection channel and sends the squelch table to the second node; and

25 the second node, by ascertaining that this office identification information is different from its own office identification information, recognizes that it is the second network connecting office and recognizes the

first network connecting office and the terminal office.

9. The method according to claim 8, further comprising a step of constructing a ring topology;

wherein if an array sequence of two offices

5 consisting of a source office and a destination office that have been entered in a source-office name field and a destination-office name field, respectively, of the squelch table differs from an array sequence of the offices in the ring topology, said second node

10 determines that it is a second network connecting office of an arrangement in which the terminal office exists outside first and second network connecting offices.

10. A method of recognizing offices of a ring network having first and second network connecting offices for  
15 connecting ring networks together and for dropping a signals from a terminal office, comprising the steps of:

recognizing at each node of the ring network, based upon channel setting information, whether the node is the terminal office of an arrangement in which the  
20 terminal office exists intermediate the first and second network connecting offices;

executing a procedure, which is for creating squelch tables of working and protection channels based upon the channel setting information, between a first  
25 node, which has been recognized as being the terminal office, and other nodes;

identifying a second node, which is the second network connecting office, at the first node by the

procedure for creating a squelch table of the protection channel;

    sending office identification information, upon embedding this information in the squelch table of the protection channel, from the first node to the second node; and

    recognizing, at the second node, that this node is the second network connecting office based upon the office identification information.

10 11. The method according to claim 10, wherein the office identification information is information specifying a range of the working channel obtained when squelch tables of the working channel are created; and  
    on the basis of this information, said second node  
15 recognizes that it is the second network connecting office and recognizes which node is the first network connecting office and which node is the terminal office.

12. The method according to claim 11, wherein the information specifying the range of the working channel  
20 is office identification information of the first network connecting office and of the terminal office;

    the first node enters this information in a source-office name field and a destination-office name field of the squelch table of the protection channel and sends  
25 the squelch table to the second node; and

    the second node, by ascertaining that this office identification information is different from its own office identification information, recognizes that it is

the second network connecting office and recognizes the first network connecting office and the terminal office.

13. The method according to claim 12, further comprising a step of constructing a ring topology;

5        wherein if an array sequence of two offices consisting of a source office and a destination office that have been entered in a source-office name field and a destination-office name field, respectively, of the squelch table differs from an array sequence of the  
10        offices in the ring topology, said second node determines that it is a second network connecting office of an arrangement in which the terminal office exists intermediate first and second network connecting offices.